ABSTRACT OF THE DISCLOSURE

A magnetic tape having a small degree of deformation, high form stability and little decrease in reproduction output even after stock at a high humidity is provided. The magnetic tape includes a longitudinally extending nonmagnetic support, a magnetic layer formed by depositing a plurality of evaporated magnetic films, each having an oblique column-like structure, on a principal surface of the nonmagnetic support so that a growth direction of each of the evaporated magnetic films is opposite to the longitudinal direction, a protective layer formed on the magnetic layer, and a backcoating layer formed on the other surface of the nonmagnetic support, wherein a heat-shrinkage ratio in the longitudinal direction and a width direction is defined to be 0.50% or less and a humidity expansion coefficient at 25 °C is defined to be $1 \times 10^{-6}$/% RH or less after stock at 100 °C and 5 %RH for 30 minutes.